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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/709,833	06/01/2004	Xing LI	119021	3832
27074 7590 08/29/2007 OLIFF & BERRIDGE, PLC. P.O. BOX 19928 ALEXANDRIA, VA 22320			EXAMINER WOLDEMARIAM, AKILILU K	
			ART UNIT 2609	PAPER NUMBER
			NOTIFICATION DATE 08/29/2007	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.	Applicant(s)	
10/709,833	LI ET AL.	
Examiner	Art Unit	
Aklilu k. Woldemariam	2609	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 June 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 06/01/2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on June 01, 2004 was filed after the mailing date of June 01, 2004. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the examiner is considering the information disclosure statement.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. **Claims 1, 4, 6, 8, 11, 13, 15-19 and 22** are rejected under 35 U.S.C. 102(b) as being anticipated by Fan et al., Fan (U.S. Patent number 5, 850, 474).

Regarding claims 1 and 8, Fan discloses a pixel classification (item 46, fig. 4, item S607, fig.6, item S703, fig. 7) method and apparatus, comprising determining a background intensity level of an image (see column 3, lines 21-26), the background intensity level being based on substantially all of the pixels of the image (column 3, lines 21-29); classifying a pixel of the image (column 3, lines 26-29); and checking the classification of the pixel based on the determined background intensity level of the image (item S603, S607, fig.6, column 3, lines 14-18).

Regarding claims 4 and 11, Fan discloses the pixel classification (item 46, fig. 4, item S607, fig.6, item S703, fig. 7) method and apparatus of claims 3 and 10, further comprising reclassifying the pixel as background when the pixel is classified as a class eligible to be reclassified (item S707 and S709, fig.7, item 77, fig.8 column 6, lines 27-28, 45-47 and 54-58, column 7, lines 5-10) and the intensity of the pixel is not less than the intensity of the white point of the image (see column 3, lines 23-29).

Regarding claims 6 and 13, Fan discloses the pixel classification (item 46, fig. 4, item S607, fig.6, item S703, fig. 7) method and apparatus of claim 1, wherein the determining step comprises identifies a spread of intensity levels of substantially all the pixels of the image and determining (see column 3, lines 23-29) an intensity level of a majority of the pixels (see column 3, lines 14-18).

Regarding claim 15, Fan discloses an image processing method, comprising determining a background intensity level of an image (see column 3, lines 14-16), the background level being based on substantially all of the pixels of the image; classifying a pixel of the image (item 46, fig. 4, item S607, fig.6, item S703, fig. 7); checking the classification of at least a portion of the pixels of the image based on the determined background intensity level of the image (see column 1, lines 66-67 and column 2, lines 1-5 and 35-39); reclassifying pixels based on results of the checking step (item S707 and S709, fig.7, item 77, fig.8 column 6, lines 27-28, 45-47 and 54-58, column 7, lines 5-10); and processing image data of

the pixels of the image based on the classification of the pixels (see column 3, lines 8-13).

Regarding claim 16, Fan discloses the image processing method of claim 15, further comprising storing a label associated with each of substantially all of the pixels, wherein the label of each of substantially all of the pixels (see column 4, lines 10-20) is based on results of the classification step (see column 4, lines 10-20 and column 5, lines 10-13) and the checking step for the pixel (see column 4, lines 10-20 and column 5, lines 10-13).

Regarding claim 17, Fan discloses the image processing method of claim 15, wherein classifying a pixel of the image (item 46, fig. 4, item S607, fig.6, item S703, fig. 7) comprises classifying the pixel as one of smooth contone, rough contone, text, background, graphics and halftone (see column 1, lines 15-18).

Regarding claim 18, Fan discloses the image processing method of claim 15, wherein the determining step comprises determining a white point of the image based on a characteristic of substantially all of the pixels of the image (see column 1, lines 66-67 and column 2, lines 1-5).

Regarding claim 19, Fan discloses the image processing method of claim 18, wherein the checking step comprises comparing an intensity of the pixel with an intensity of the white point of the image (see column 1, lines 66-67 and column 2, lines 1-5).

Regarding claim 22, Fan discloses the image processing method of claim 15, wherein the portion of the pixels comprises substantially all of the pixels of the image (see column 1, lines 66-67 and column 2, lines 1-5 and 35-39).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 2, 3, 9, 10** are rejected under 35 U.S.C. 103(a) as being obvious over Fan as applied to claims 1, 8, and 15 above, and in view of Li et al., Li (U.S. Patent number 7, 058, 222 B2).

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the

application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(I)(1) and § 706.02(I)(2).

Regarding claims 2 and 9, Fan discloses the pixel classification (item 46, fig. 4, item S607, fig.6, item S703, fig. 7) method and apparatus of claims 1 and 8.

Fan does not **determining a white point of the image based on at least one characteristic of substantially all of the pixels of the image.**

However, Li discloses **determining a white point of the image based on at least one characteristic of substantially all of the pixels of the image** (see item 38, fig.2, column 1, lines 40-45 and column 3, lines 30-37).

It would have been obvious to someone of the ordinary skill in the art at the time when the invention was made to use Li's determining a white point of the image based on at least one characteristic of substantially all of the pixels of the image in Fan's pixel classification because it will allow to determine the gain factor, [Li's, see column 3, lines 53-55].

Regarding claims 3 and 10, Fan discloses the pixel classification (item 46, fig. 4, item S607, fig.6, item S703, fig. 7) method and apparatus of claims 2 and 9, wherein the checking step comprises comparing an intensity of the pixel with an intensity (column 1, lines 66-67 and column 2, lines 1-7).

Fan does not disclose **the white point of the image.**

However, Li discloses **the white point of the image** (see item 38, fig.2, column 1, lines 40-45 and column 3, lines 30-37).

It would have been obvious to someone of the ordinary skill in the art at the time when the invention was made to use Li's white point of the image in Fan's pixel classification because it will allow to determine the gain factor, [Li's, see column 3, lines 53-55].

6. **Claim 5, 7, 12, 14, 20 and 21** are rejected under 35 U.S.C. 103(a) as being unpatentable over Fan as applied to claims 1, 8 and 15 above and in view of Li et al., Li (U.S. Patent number 6, 360, 009 B2).

Regarding claims 5 and 12, Fan discloses **the pixel classification** (item 46, fig. 4, item S607, fig.6, item S703, fig. 7) **method and apparatus of claims 3 and 10, further comprising reclassifying the pixel** (item S707 and S709, fig.7, item 77, fig.8, column 6, lines 27-28, 45-47 and 54-58, column 7, lines 5-10), **and an equivalent class when the pixel is classified as background and the intensity of the pixel** (see column 3, lines 23-29) **is less than the intensity of the white point of the image** (see column 1, lines 66-67 and column 2, lines 1-7).

Fan does not disclose **smooth contone**.

However, Li discloses smooth contone (see column 4, line 7).

It would have been obvious to someone of the ordinary skill in the art at the time when the invention was made to use Li's smooth contone in Fan's because it is clearly indicated the smooth contone in reference [Li's, see column 4, lines 5-6].

Regarding claims 7 and 14, Fan discloses the pixel classification (item 46, fig. 4, item S607, fig.6, item S703, fig. 7) method and apparatus of claims 4 and 11, and equivalent class (see column 7, lines 19-20).

Fan does not disclose the pixel is classified as smooth contone.

However, Li discloses the pixel is classified as smooth contone (see column 3, line 66-column 4, line -7)

It would have been obvious to someone of the ordinary skill in the art at the time when the invention was made to use Li's the pixel is classified as smooth contone in Fan's because it is clearly indicated the smooth contone in reference [Li's, see column 4, lines 5-6].

Regarding claim 20, Fan discloses the image processing method of claim 19, wherein when the intensity of the pixel (see column 3, lines 23-28) is not less than the intensity of the white point of the image, the pixel is reclassified as background (item S707 and S709, fig.7, item 77, fig.8, column 6, lines 27-28, 45-47 and 54-58, column 7, lines 5-10).

Fan does not disclose the pixel is classified as smooth contone.

However, Li discloses the pixel is classified as smooth contone (see column 3, line 66-column 4, lines 2-7)

It would have been obvious to someone of the ordinary skill in the art at the time when the invention was made to use Li's the pixel is classified as smooth contone in Fan's because it is clearly indicated the smooth contone in reference [Li's, see column 4, lines 5-6].

Regarding claim 21, Fan discloses the image processing method of claim 19, wherein when the pixel is classified as background and the intensity of the pixel (see column 3, lines 23-29) is less than the intensity of the white point of the image.

Fan does not disclose the pixel is reclassified as smooth contone.

However, Li discloses the pixel is reclassified as smooth contone (see column 3, line 66-column 4, lines 2-7)

It would have been obvious to someone of the ordinary skill in the art at the time when the invention was made to use Li's the pixel is classified as smooth contone in Fan's because it is clearly indicated the smooth contone in reference [Li's, see column 4, lines 5-6].

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aklilu k. Woldemariam whose telephone number is 571-270-3247. The examiner can normally be reached on Monday-Thursday 6:30 a.m-5:00 p.m EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alexander Eisen can be reached on 571-272-7687. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2609

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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08/20/2007